

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK**

NORTH PLATE SEMICONDUCTOR, LLC,
a Delaware company,

Plaintiff,

V.

MICROCHIP TECHNOLOGY INC, a Delaware :
corporation, and MICROSEMI CORPORATION, :
a Delaware corporation, :

Defendants.

Case No.:

COMPLAINT FOR PATENT INFRINGEMENT

JURY TRIAL DEMANDED

Plaintiff North Plate Semiconductor, LLC (“NPS” or Plaintiff”) hereby asserts a claim for patent infringement against Defendants Microchip Technology Inc. (“Microchip Technology”), and Microsemi Corporation (“Microsemi”)(collectively, “Defendants”), and in support thereof alleges as follows:

NATURE OF CASE

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §1, *et seq.*, specifically including 35 U.S.C. §271.

2. As set forth below, Plaintiff holds the rights in U.S. Patent Nos. 6,617,641 (“the ‘641 Patent”) and 6,620,653 (“the ‘653 patent”) (cumulatively “Patents-in-Suit”). Under 35 U.S.C. § 282(a), the Patents-in-Suit are entitled to a presumption of validity. Plaintiff is suing Defendants for infringing its patents, and doing so willfully. Plaintiff seeks to recover damages from Defendants, including treble damages for willful infringement.

THE PARTIES

3. North Plate Semiconductor, LLC is a company, organized and existing under the laws of the State of Delaware, with a principal place of business at 39555 Orchard Hill Place,

Suite 600, Novi, Michigan, 48375.

4. Upon information and belief, Defendant Microchip Technology, Inc. is a Delaware corporation with a principal place of business at 80 Arkay Drive, Suite 100, Hauppauge, New York 11788. Upon information and belief, Microchip Technology, Inc. may be served with process by serving its agent for service of process, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

5. Upon information and belief, Defendant Microsemi Corporation is owned by Defendant Microchip Technology, Inc. Upon information and belief, Defendant Microsemi Corporation is a Delaware corporation with a principal place of business at One Enterprise, Aliso Viejo, CA 92656. Upon information and belief, Microsemi Corporation may be served with process by serving its agent for service of process, United States Corporation Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

6. On May 29, 2018, Microchip announced that it had completed its acquisition of Microsemi.

JURISDICTION

7. This is an action for patent infringement arising under the patent laws of the United States of America, more specifically under 35 U.S.C. § 1, *et seq.*, including 35 U.S.C. §271. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has personal jurisdiction over Defendants because Defendants, among other things, conduct business in, and avail themselves of the laws of, the State of New York. Upon information and belief, Defendant Microchip Technology has a principal place of business in this District. In addition, upon information and belief, Defendants through their own acts and/or through the acts of their affiliated companies (acting as its agents or alter egos) make, use, offer to sell, sell (directly or through intermediaries), import, license and/or supply, in this District and elsewhere in the United States, the Accused Products (as defined below), through regular distribution channels, knowing such products would be used, offered for sale and/or sold in this District. Plaintiff's cause of action arises directly from Defendants' business contacts and

other activities in the State of New York and in this District.

VENUE

9. Venue properly lies within this judicial District and division, pursuant to 28 U.S.C. §§ 1391(b), (c), and (d), and 1400(b).

10. Upon information and belief, this District is where Defendants have committed acts of infringement and where Defendant Microchip Technology has a regular and established place of business at 80 Arkay Drive, Suite 100, Hauppauge, New York 11788. Defendants conduct substantial business directly and/or through third parties or agents in this District by selling and/or offering to sell the Accused Products and/or by conducting other business in this District.

THE PATENTS-IN-SUIT

U.S. Patent No. 6,617,641

11. The ‘641 Patent, entitled “High Voltage Semiconductor Device Capable of Increasing a Switching Speed,” was duly and lawfully issued by the United States Patent and Trademark Office on September 9, 2003. The ‘641 Patent issued from U.S. Patent Application No. 10/059,186 filed on January 31, 2002 by inventors Akio Nakagawa and Tomoko Matsudai. A true and correct copy of the ‘641 Patent is attached hereto as **Exhibit A**.

12. The ‘641 Patent is valid and enforceable.

13. The ‘641 Patent is generally directed to a high voltage semiconductor device, such as an Insulated Gate Bipolar Transistor (IGBT).

14. Plaintiff is the assignee and the owner of all right, title and interest in and to the ‘641 Patent, and has the right to sue and recover damages for infringement thereof.

U.S. Patent No. 6,620,653

15. The ‘653 Patent, entitled “Semiconductor Device and Method of Manufacturing the Same,” was duly and lawfully issued by the United States Patent and Trademark Office on September 16, 2003. The ‘653 Patent issued from U.S. Patent Application No. 09/961,361 filed on September 25, 2001 by inventors Tomoko Matsudai, Hidetaka Hattori, Akio Nakagawa. A

true and correct copy of the '893 Patent is attached hereto as **Exhibit B**.

16. The '653 Patent is valid and enforceable.

17. The '653 Patent is generally directed to a high voltage semiconductor device such as an IGBT.

18. Plaintiff is the assignee and the owner of all right, title and interest in and to the '653 Patent, and has the right to sue and recover damages for infringement thereof.

GENERAL ALLEGATIONS

26. The Accused Products include at least Microsemi's IGBT Power MOS 8 with PT and IGBT Power MOS 7 with PT devices (collectively defined as the "Accused Products"). As stated on Microsemi's website with respect to some of the Accused Products and in Microsemi's 2017 Annual Report, some of the Accused Products are designed for use in medical imaging, powertrain & EV charging, communications infrastructure systems, wireless and wired LAN systems, implantable pacemakers and defibrillators, radar systems, military and commercial satellites and aircraft, and enterprise storage and hyperscale data centers. Microsemi's components are used in products including those in the aerospace & defense, communications, data center, and industrial markets. These products are sold and/or offered for sale throughout the United States, including New York.

27. Defendants manufacture the Accused Products and directly, and/or through their affiliates, make, use, import, sell and offer to sell the same throughout the United States, including New York. Defendants also support and encourage others to import, use, offer for sale and sell throughout the United States, including New York, products incorporating the Accused Products as material components.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,617,641

28. Plaintiff incorporates by reference the allegations set forth in the preceding paragraphs.

29. Defendants have directly infringed and are infringing literally and/or under the doctrine of equivalents, in violation of the §271(a) the '641 Patent at least during the period prior

to the expiration of the patent by making, using, importing, offering for sale and/or selling the semiconductor devices identified below, including but not limited to device model numbers listed in **Exhibit C** (“Accused Devices”), in this judicial district and elsewhere throughout the United States.

30. As non-limiting examples of Defendants’ infringement of the ‘641 Patent, Microsemi’s IGBT Power MOS 8 with PT (hereinafter, “IGBT-MOS8-PT”) and IGBT Power MOS 7 with PT (hereinafter, “IGBT-MOS7-PT”) (collectively, “Power-MOS-Devices”) infringe at least claims 1-10 of the ‘641. The Power-MOS-Devices are IGBT devices, and therefore, on information and belief, contain the claimed base layer, source layer, high resistance layer and gate electrode. Because the Power-MOS-Devices are IGBT devices, they contain the claimed drain layer, where the drain layer is a different conductivity type from the high resistance layer and source layer. A person of ordinary skill would understand that, under the proper construction of the term “drain layer” in the ‘641 patent, the accused Power-MOS-Devices can have a drain layer because, for example, the ‘641 patent, FIG. 1, describes an IGBT device with a “drain layer.” (col. 3:35-55). Because the Power-MOS-Devices use PT (punch through) technology, they contain the claimed buffer layer, and the buffer layer is a conductivity type different from the drain layer. The remaining elements of claims 1-10 are alleged upon information and belief.

31. Upon information and belief, Defendants have and continue to intentionally induce others to directly infringe in violation of 35 U.S.C. §271(b), and those actions are undertaken with the specific intent that they will, in fact, induce direct infringement and with full knowledge that Defendants’ products infringe one or more claims of the ‘641 Patent both literally and/or under the doctrine of equivalents. By way of example only, Defendants sell and deliver the infringing Accused Devices to U.S. distributors including Arrow Electronics located in Plymouth, MI, Mouser Electronics located in Mansfield, TX, Digi-Key Electronics located in Thief River Falls, MN and others, and thereafter induce these distributors to sell and offer for sale the infringing products to customers in the United States thereby directly infringing the ‘641

Patent. Arrow Electronics, Mouser Electronics and Digi-Key maintain websites (arrow.com, mouser.com, and digikey.com) available to U.S.-based customers that, as a result of Defendants' inducement, stock, sell, and offer for sale the Accused Devices.

32. Defendants further induce third parties to incorporate the Accused Devices as components into additional products for various applications to be used in the United States, by, for example, providing datasheets, application notes, product briefs, and other collateral on the Internet website (<http://www.Microsemi.com>) available to U.S. customers. As disclosed in Microsemi's 2017 Annual Report, Microsemi markets and sells a portion of the accused products to third party distributors and resellers.

33. Upon information and belief, pursuant to Microsemi's 2017 Annual Report, one or more of the Accused Devices were imported, used and sold in the United States as components of third-party end products, including, but not limited to, airplanes, satellites, commercial and military avionics systems, wireless communications products, data center products that enable high-speed communications between servers, switches and storage devices, industrial controls, medical devices, implantable defibrillators, pacemakers, MRI machines and portable medical equipment.

34. Defendants have been on notice of the '641 Patent and Defendants' infringement of the '641 Patent by the Accused Devices since, at least, January 22, 2018 pursuant to a letter from Plaintiff's President, Mark Foster, and since at least, June 2, 2018, pursuant to a letter from Mr. Foster to David Goren, Senior Vice President of Business Affairs, as well as numerous communications regarding infringement of the '641 Patent following that letter between Mr. Foster and Jared Crop, IP Litigation Counsel, Microchip Technology Inc.

35. Upon information and belief, Defendants' continued infringement of the '641 Patent has been and continues to be willful at least as of the date of the Complaint, and warrants the enhancement of damages awarded as a result of its infringement. In particular, despite Defendants' knowledge of their infringement, Defendants have failed to stop infringing the '641 Patent.

36. Defendants are not licensed or otherwise authorized to make, use, import, sell or offer to sell any semiconductor devices encompassed by the claims in the ‘641 Patent, and Defendants’ conduct is, in every instance, without Plaintiff’s consent.

37. Defendants’ willful infringement of the ‘641 Patent renders this an exceptional case within the meaning of 35 U.S.C. §285, justifying an award to Plaintiff of its reasonable attorneys’ fees and costs incurred in connection with this litigation.

38. By reason of Defendants’ infringing activities, Plaintiff has suffered, and will continue to suffer, substantial damages in an amount to be proven at trial.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 6,620,653

39. Plaintiff incorporates by reference the allegations set forth in the preceding paragraphs.

40. Defendants have directly infringed and are infringing literally and/or under the doctrine of equivalents, in violation of the §271(a), the ‘653 Patent at least during the period prior to the expiration of the patent by making, using, importing, offering for sale and/or selling the semiconductor devices identified below including but not limited to device model numbers listed in **Exhibit C**, in this judicial district and elsewhere throughout the United States.

41. As non-limiting examples of Defendants’ infringement of the ‘653 Patent, Microsemi’s Power-MOS-Devices infringe at least claims 10, 12, 13 and 14 of the ‘653 Patent. The Power-MOS-Devices are IGBT devices, and therefore contain the claimed first (epitaxial) base layer, second base layer, emitter layer, gate electrode as well as the claimed collector layer, which is a different conductivity type from the first base layer and emitter layer. The Power-MOS-Devices are IGBT devices, and thus, also satisfy claim 14. Because the Power-MOS-Devices use PT (punch through) technology, they contain the claimed buffer layer, and the buffer layer is a conductivity type different from the collector layer. The remaining elements of claims 10, 12, 13 and 14 are alleged upon information and belief.

42. Upon information and belief, Defendants’ have and continue to intentionally induce others to directly infringe in violation of 35 U.S.C. §271(b), and those actions are

undertaken with the specific intent that they will, in fact, induce direct infringement and with full knowledge that Defendants' products infringe one or more claims of the '653 Patent both literally and/or under the doctrine of equivalents. By way of example only, Defendants sell and deliver the infringing Accused '653 Devices to U.S. distributors including Arrow Electronics located in Plymouth, MI, Mouser Electronics located in Mansfield, TX, Digi-Key Electronics located in Thief River Falls, MN and others, and thereafter induces these distributors to sell and offer for sale the infringing products to customers in the United States thereby directly infringing the '653 Patent. Arrow Electronics, Mouser Electronics and Digi-Key maintain websites (arrow.com, mouser.com, and digikey.com) available to U.S.-based customers that, as a result of Defendants' inducement, stock, sell, and offer for sale the Accused Devices.

43. Defendants further induce third parties to incorporate the Accused Devices as components into additional products for various applications to be used in the United States, by, for example, providing datasheets, application notes, product briefs, and other collateral on the Internet website (<http://www.Microsemi.com>) available to U.S. customers. As disclosed in Microsemi's 2017 Annual Report, Microsemi markets and sells the accused products to third party distributors and resellers.

44. Upon information and belief, pursuant to Microsemi's 2017 Annual Report, one or more of the Accused Devices were imported, used and sold in the United States as components of third-party end products, including, but not limited to, airplanes, satellites, commercial and military avionics systems, wireless communications products, data center products that enable high-speed communications between servers, switches and storage devices, industrial controls, medical devices, implantable defibrillators, pacemakers, MRI machines and portable medical equipment.

45. Defendants have been on notice of the '653 Patent and Defendants' infringement of the '653 Patent by the Accused Devices since, at least, January 22, 2018 pursuant to a letter from Plaintiff's President, Mark Foster, and since at least, June 2, 2018 pursuant to a letter from Mr. Foster to David Goren, Senior Vice President of Business Affairs, as well as numerous

communications regarding infringement of the '653 Patent following that letter between Mr. Foster and Jared Crop, IP Litigation Counsel, Microchip Technology Inc.

46. Upon information and belief, Defendants' continued infringement of the '653 Patent has been and continues to be willful at least as of the date of the Complaint, and warrants the enhancement of damages awarded as a result of its infringement. In particular, despite Defendants' knowledge of its infringement, Defendants have failed to stop infringing the '653 Patent.

47. Defendants are not licensed or otherwise authorized to make, use, import, sell or offer to sell any semiconductor devices encompassed by the claims in the '653 Patent, and Defendants' conduct is, in every instance, without Plaintiff's consent.

48. Defendants' willful infringement of the '653 Patent renders this an exceptional case within the meaning of 35 U.S.C. §285, justifying an award to Plaintiff of its reasonable attorneys' fees and costs incurred in connection with this litigation.

49. By reason of Defendants' infringing activities, Plaintiff has suffered, and will continue to suffer, substantial damages in an amount to be proven at trial.

PRAYER FOR RELIEF

Wherefore, Plaintiff requests this Court enter judgment as follows:

- A. That the '641 and '653 Patents are valid and enforceable;
- B. That Defendants have directly and indirectly infringed the '641 Patent and the '653 Patent.
- C. That such infringement is willful;
- D. That Defendants account for and pay to Plaintiff all damages pursuant to 35 U.S.C. § 284 to adequately compensate Plaintiff for Defendants' infringement of the Patents-in-Suit, but in no event less than a reasonable royalty for the use made by Defendants of the invention set forth in the Patents-in-Suit;
- E. That Plaintiff receives enhanced damages, in the form of treble damages, pursuant to 35 U.S.C. § 284;

F. That this is an exceptional case under 35 U.S.C. § 285;

G. That Defendants pay Plaintiff all of Plaintiff's reasonable attorneys' fees and expenses pursuant to 35 U.S.C. § 285;

H. That Plaintiff be granted pre-judgment and post-judgment interest in accordance with 35 U.S.C. § 284 on the damages caused to it by reason of Defendants' infringement of the Patents-in-Suit, including pre-judgment and post-judgment interest on any enhanced damages or attorneys' fees award;

I. That costs be awarded in accordance with 35 U.S.C. § 284 to Plaintiff; and

J. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.


DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury on all issues so triable in this action.

Respectfully submitted,

DATED: December 14, 2018

Kroub, Silbersher & Kolmykov PLLC



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